

REMARKS

Claims 6 and 21 have been amended to more clearly define the magnetic field generating mechanisms. Support for amended Claims 6 and 21 can be found at, for example, Fig. 12. Entry of this Amendment is respectfully requested. Claims 2-21 are pending, of which Claims 2-5 and 7-19 have been withdrawn from consideration.

Response to Claim Rejection Under § 103

Claim 6 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito et al. (JP 2001-338912) or Morimoto (JP 2001-077095) in view of Nishijima et al. (JP 06-181187).

Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito et al. (JP 2001-338912) or Morimoto (JP 2001-077095) in view of Arami et al. (U.S. Patent No. 6,014,943).

Applicants respectfully traverse.

The present claims are directed to a magnetic field generator for magnetron plasma, characterized in that the magnetic field generator comprises an upper magnetic field generating mechanism and a lower magnetic field generating mechanism, the upper and lower magnetic field generating mechanisms are arranged such as to be brought close to each other with respect to a horizontal level at which the substrate is positioned and moved away from each other with respect to the horizontal level, thereby to control a strength of the multi-pole magnetic field in said process chamber. In other words, the present invention relates to a multi-pole magnetic field whose strength in the process chamber is controlled by adjusting the gap between the upper and lower magnetic field generating mechanisms, which adjustment is carried out by bringing them close to each other or moving away them from each other.

In contrast, Nishijima discloses that the location of the upper permanent magnet 21 is adjusted with respect to an upper electrode 16, and likewise, the location of the lower permanent magnet 31 is adjusted relative to a lower electrode 17. *See*, paragraph [0063]. Thus, Nishijima fails disclose or suggest an adjustment of a gap between the upper magnetic field generating mechanism and the lower magnetic field generating mechanism. In other words, Nishijima merely discloses the location adjustment between the upper permanent magnet 21 and the upper electrode 16, and likewise, the location adjustment between the lower permanent magnet 31 and the lower electrode 17.

The Examiner asserts that Nishijima discloses that the magnets 21, 31 are independently vertically adjusted by mechanisms 22, 32. The Examiner further asserts that regardless of whether or not the magnets are adjusted relative to the electrode, since the magnets move vertically, the magnets are being brought close to each other and they move away from each other. Applicants respectfully disagree.

Nishijima fails disclose or suggest the presently claimed mechanisms whereby the upper and lower magnetic field generating mechanisms are brought close to each other with respect to a horizontal level at which the substrate is positioned and moved away from each other with respect to the horizontal level. Further, the Examiner's position is based on improper hindsight.

Ito and Morimoto fail to make up for the deficiencies of Nishijima. Thus, Ito or Morimoto, and Nishijima fail to render obvious present Claims 6 and 21.

Claim 20 is patentable at least by virtue of its dependence from Claim 6.

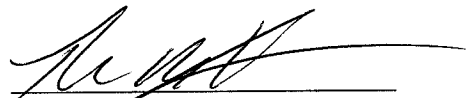
Withdrawal of the rejections is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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